

### REMARKS

Claims 1-43 are pending in the present application. Claims 1-7, 9-13, 15-21, 23-27 and 29-40 have been amended herewith. Reconsideration of the claims is respectfully requested.

#### **I. 35 U.S.C. § 103, Obviousness**

A. The Examiner rejected Claims 1-7, 9-11, 13-21, 23-25 and 27-43 under 35 U.S.C. § 103 as being unpatentable over Menon et al (U.S. 5,537,488) in view of Glommen et al (U.S. 6,393,479). This rejection is respectfully traversed.

The present invention of Claim 1 is directed to an improved technique for selecting data sets for use with a predictive algorithm. A statistical distribution of a training data set is compared with a statistical distribution of a testing data set to identify a discrepancy between these distributions with respect to data network geographic information. Based upon such comparison and its associated discrepancy identification, selection of entries in the training data set and/or testing data set is modified. These modified entries are then used by the predictive algorithm, thereby taking into account the influences of data network geography when using the predictive algorithm. This invention is substantially different from the teachings in both of the cited references used in rejecting Claim 1. Generally speaking, the cited Menon reference teaches a pattern recognition system, where multiple training input patterns from multiple classes of subjects are grouped into clusters within categories. After training, the categories are defined by class based upon a peak class for the categories. During testing, frames of test data from a subject are correlated with the category definitions to determine a closest correlated category. This cited reference makes no mention of (i) data network geographic information, or (ii) use of data network geographic information *to modify* entries of the testing or training data sets used by a predictive algorithm. Generally speaking, the cited Glommen reference teaches an analysis tool that follows the traffic flow internal to a web site, where the state of a visitor's browser is recorded and data relating to the path visitors take through the web site is collected and studied. This cited reference makes not mention of use of data network geographic information *to modify* entries of the testing or training data sets used by a predictive algorithm.

Because neither reference teaches or otherwise suggests the particular claimed use of data network geographic information - such data network geographic information being used *to modify* entries of the testing or training data sets used by a predictive algorithm - it is respectfully

submitted that the Examiner has failed to properly establish a prima facie showing of obviousness with respect to Claim 1<sup>1</sup>. Accordingly, the burden has not shifted to Applicants to overcome an obviousness assertion<sup>2</sup>. In addition, as a proper prima facie showing of obviousness has not been established, Claim 1 has been improperly rejected<sup>3</sup>.

The present invention of Claim 41 is directed to an improved technique for *predicting customer behavior*. As a part of predicting customer behavior, data network geographic information for a plurality of customers is obtained, and a predictive algorithm is trained using such data network geographic information. This predictive algorithm is used to predict customer behavior based on this data network geographic information. None of the cited references teach or suggest any type of customer behavior prediction, either as expressly recited in the claims or otherwise. Thus, a prima facie case of obviousness has not been properly established by the Examiner with respect to Claim 41, and therefore the burden has not shifted to Applicants to rebut the obviousness assertion.

Specifically with respect to Claim 1, such claim recites "generating a second statistical distribution of a testing data set". As can be seen, a distribution of a testing data set is generated. Importantly, this claimed step is not merely with respect to generating a testing data set, but rather to generating a *distribution* of a testing data set (this is in addition to generation a distribution of a training data set). In rejecting this aspect of Claim 1, the Examiner states that this step of generating a distribution of a testing data set is taught by Menon at Col. 20, lines 60-63. Applicants urge that there, Menon states:

"receiving at least one input test pattern of the data type from a subject during a testing operation;

computing a correlation between a category definition and each test input pattern"

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<sup>1</sup> To establish prima facie obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art (emphasis added by Applicants). MPEP 2143.03. See also, *In re Royka*, 490 F.2d 580 (C.C.P.A. 1974).

<sup>2</sup> In rejecting claims under 35 U.S.C. Section 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant. *Id.*

<sup>3</sup> If the examiner fails to establish a prima facie case, the rejection is improper and will be overturned. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).